

Can the Foot Pain Be the Varicella Zoster (Shingles)?

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Abstract

Shingles is one of the two different clinical presentations of infection of VZV which is a DNA virus. Humans are a known reservoir for the Varicella zoster virus (VZV). It is very contagious. The virus that remains latent after infection in childhood and can be reactive due to various reasons (immune system suppression, old age, stress factors, etc.). It involves various dermatomes after reactivation. Varicella-zoster appears mostly on thoracic, cervical, and ophthalmic dermatomes. Rarely, it is located in the upper and lower extremity dermatomes. In this study; 7 patients with shingles on the foot and sole were examined. It was aimed to emphasize that varicella zoster (zona) may be the cause of foot pain in patients presenting to the emergency department with complaints such as pain, burning and inability to step on standing, and to review the age, gender, underlying factors of the zona cases which are not previously mentioned in the literature.

Keywords: Varicella zoster virüs, foot pain, emergency medicine

Introduction

Shingles is one of the two different clinical presentations of infection of VZV which is a DNA virus. Humans are a known reservoir for the Varicella zoster virus (VZV). It is very contagious. VZV belongs to the herpes virus family^{3,4}. In latent infection, reactivation of the virus in the dorsal root ganglion due to a previous varicella-zoster (VZV) infection in childhood causes this clinical presentation². Latent varicella-zoster virus (VZV) is a disease which usually involves a single sensory nerve or its dermatome affected by aging, immune suppression, stress, and various triggering factors¹. A single dermatome and also the adjacent dermatomes can be involved. Varicella-zoster appears mostly on thoracic, cervical, and ophthalmic dermatomes². The lower and upper extremities are rarely involved. The lower extremity dermatomes that can be affected are the legs, feet, and sole. In patients in this study varicella zoster lesions are seen especially in the lower extremity were found to be on foot and sole. The need to considering varicella-zoster (shingles) as a cause of foot pain in patients presenting to the emergency department with complaints such as pain, burning, inability to step on standing.

Methods and Materials

The patients who were admitted to Our Hospital emergency outpatient clinic with complaints such as standing pain, burning, inability to walk between February 2018 and November 2018 were evaluated retrospectively.

Results

Among 526413 patients who admitted between these dates, 93 were diagnosed with varicella zoster. Lesions are located in the lower extremity in 7 of 93 patients. 5 (71.4%) of the 7 patients were male, and 2 (28.6%) of them were female. The mean age of the female patients was 57,25 years (33-72 years). The mean age of male patients was 51 years (35-68). In two patients (28.5%) the lesions were found to be on the plantar side of the foot and in medial section and in 3 patients (42.8%) from the lateral part spreading to the fingers, while in 2 patient (28.5%) the lesions were in the mid-plantar section. The history of the disease was questioned in 5 patients (71.4%). Chronic disease was detected in 5 (71.4%) patients. 3 of the patients had diabetes mellitus and 2 of them had hypertension, and 1 patient had peripheral vascular dis-

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ease and 1 patient had cerebrovascular disease.No additional disease was observed in 2 patients. When stress factors were questioned, work and familial stress factors were described by 6 patients (85.7%). All patients presented vesicular lesions when they admitted to the emergency department. Patients were admitted to the emergency department with complaints of pain (100%), burning sensation (83.3%) and itching (100%) before the lesions were started. Pain (100%), rash (100%), burning sensation (77,7%), itching (83.3%) complaints were described after the lesions occurred. The treatments were arranged following the diagnosis. At the end of the treatment, they were referred to the dermatology polyclinic for the follow-up.

Discussion

HZ (Herpes zoster) is an acute viral infection which is characterized by painful, group tendency of vesicles on one or more adjacent dermatomes with the reactivation of the latent virus in the dorsal root ganglia following a childhood chickenpox infection, in some cases occurs result of a reduction in immune response of the host^{13, 14}. Secondary infection of the rash is important in addition to severe pain in shingles⁸. In two of our patients, secondary infection was detected.

The incidence of VZV in healthy people can range from 0.4 to 11 in 1000 per year depending on immune response². Some predisposing factors have been identified in the activation of latent infection. These can be listed as chickenpox,

the status of varicella vaccination, being over 50 years old, immunosuppressive conditions and drugs, trauma and psychological stress¹². In our study, only 2 patients did not have a history of a chronic disease. Besides, in our 5 patients, psychological stress was detected due to various reasons. Shingles show the same rates in male and female sexes^{5,6}. In some studies, the rates were found to be different. In our study, there was a difference between genders.

The diagnosis can be made with the presence of prodromal burning sensation-pain, itching, and shingles rashes. Throughout the affected unilateral dermatome, the rash is seen⁵. It can be diagnosed by using cytopathologic evaluation and polymerized chain reaction in atypical rashes^{7,8}.

A most common symptom of shingles is pain⁹. Pain is presented days or weeks before the rashes occur. The pain usually is described in the form of the burning sensation, tingle and as well as paresthesia, hyperesthesia and also may be in the form of electric shock^{2,10}. Local pain of the shingles is severe. Reason for pain is thought to be a result of the stimulation of primary neurons in the skin due to inflammation of the pain receptors as a result of tissue damage¹¹. The patients described burning sensation and pain which causes inability to walk on the feet and sole before the lesions were seen. Four of our patients reported that they were admitted to the hospital due to pain several times. But following investigations in the hospital's chronic diseases were thought to be the cause of the pain on the foot. Our patients have presented vesicular lesions additionally to pain, burning sensation, itching symptoms when they admitted to our emergency department.

PATIENT	GENDER	AGE	CHRONIC DISEASE	STRESS FAKTOR
Patient1	WOMAN	72	DİYABETES-HYPERTENSİON	-
Patient2	MAN	68	DİYABETES	+
Patient3	MAN	56	DİYABETES-CVD	-
Patient4	MAN	54	PERİPHERAL VESSEL DISEASE	+
Patient5	MAN	42	NO DISEASE	+
Patient6	MAN	35	HİTPERTENSİON	+
Patient7	WOMAN	33	NO DISEASE	+

Conclusion

Varicella zoster is often seen in advanced age and is mostly a disease that affects the daily lives of patients. Immune insufficiency, malignancies, chronic diseases and stress caused by various factors can lead to reactivation of latent varicella-zoster virus. Diagnosis of shingles on foot which is presenting with pain, burning sensation, inability to walk, is often skipped. It should be kept in mind that there may be shingles on the foot in patients with such complaints.

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